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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,389

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Tsunchisa Sanagi

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GLOBAL IP COUNSELORS, LLP
1233 20TH STREET, NW, SUITE 700
WASHINGTON, DC 20036-2680

EXAMINER

VERDIER, CHRISTOPHER M

ART UNIT

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3745

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,389	Applicant(s) SANAGI ET AL.	
	Examiner Christopher Verdier	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11-15-10.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,7,10,11,13,14,17,20 and 23-31 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 29-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7,10,11,13,14,17,20 and 23-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3745

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 15, 2010 has been entered.

Concerning the rejections under 35 USC 112, first paragraph, Applicant has amended the independent claim 1, 2, 3, and 4 to clarify the meaning of the unsupported limitations, noted that the edge portion in the claims refers to the ring-side edge portion 53 (claims 1-2) or the plate-side edge portion 56, cited MPEP 2163, and stated that the drawings form part of the disclosure, as set forth on pages 13-14 of Applicant's Arguments dated November 15, 2010. These arguments are noted with appreciation, and overcome the rejections under 35 USC 112, first paragraph in the finally rejected claims, but amended instant claims 1-4 are rejected under 35 USC 112, first paragraph for the reasons set forth later below.

Applicant's arguments that the primary reference to Japanese Publication 64-41,697 does not disclose the features of the instant amended claims 1-4 have been carefully considered and are persuasive. However, Van Rijswijk 1,983,201 discloses most of the features of independent claims 1-4.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 3745

Claims 1-4, 6-7, 10-11, 14, 17, 20, and 23-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claims 1, 2, 3, and 4, in the last two lines, recite the edge portion extending along a majority of the length of the hollow space between the leading and trailing rotational edges of the blade. The underlined limitations add new matter, because a majority is greater than half of the total, and would include a range of values not disclosed by the original specification or drawings (such as 51 percent, 54 percent, 70 percent, etc.). The specification does not mention this limitation, and support is provided only for the value of the extension length shown in the drawings.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 3745

Claims 1-4, 7, 11, 14, and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Rijswijk 1,983,201 in view of either (Glucksman 3,536,416 or Kim 6,848,887). Van Rijswijk 1,983,201 discloses an impeller of a centrifugal fan substantially as claimed, comprising: a main plate 18/20 configured to rotate around a rotating shaft 16, a plurality of hollow blades 21 annularly disposed around the rotating shaft, each of the hollow blades including a first surface portion 22 fixed to the main plate, a second surface portion 23 attached to the first surface portion to form a hollow space therebetween, a side plate 17/19 fixed to the first surface portions, the hollow blades being disposed between the main plate and the side plate, the main plate, the hollow blades and the side plate being configured to take in a gas from a rotating shaft direction and blow out the gas in a direction intersecting the rotating shaft, each of the second surface portions forming at least part of a negative-pressure surface, and each of the first surface portions forming at least part of a positive pressure surface, the hollow blades including a blade shape retaining mechanism 24 to prevent the second surface portions from being deformed toward outer peripheral sides of the second surface portions by a centrifugal force, and each of the first surface portions having an unnumbered edge portion (the left and right flanges perpendicularly attached to 22, as shown in figure 3) extending from a side plate end thereof toward a respective one of the second surface portions, and each edge portion having an end surface that abuts the respective one of the second surface portions at a side plate end thereof to form part of the blade shape retaining mechanism and to define a side plate end of the hollow space, the side plate ends of the hollow spaces, the first surface portions and the second surface portions being disposed at ends of the blades closer to the side plate than the main plate. Each blade has an unnumbered leading rotational edge and an unnumbered trailing rotational edge with the edge portion of the first side portion extending between the leading and trailing rotational edges of the blade such that an interior surface of the edge portion

Art Unit: 3745

faces the main plate with the hollow space of the blade disposed between the interior surface of the edge portion and the main plate, the hollow space having a length measured between the leading and trailing rotational edges of the blade, and the edge portion extending along a majority of the length of the hollow space between the leading and trailing rotational edges of the blade. The second surface portion is configured to remain attached to the first surface portion while a centrifugal force resulting from the rotation of the main plate acts thereon. A side plate-side guide mechanism 26, 26 positions the hollow blades in the side plate. A main plate-side guide mechanism 27, 27 positions the hollow blades in the main plate. The second surface portion is attached to the first surface portion by inserting a portion of the second surface portion into the first surface portion (see figure 10). The main plate ends of the hollow spaces, the first surface portions and the second surface portions are also disposed at ends of the blades closer to the main plate than the side plate. The edge portion of the first side portion also extends between the leading and trailing rotational edges of the blade such that an interior surface of the edge portion faces the side plate with the hollow space of the blade disposed between the interior surface of the edge portion and the side plate, the hollow space having a length measured between the leading and trailing rotational edges of the blade, and the edge portion extending along a majority of the length of the hollow space between the leading and trailing rotational edges of the blade

However, Van Rijswijk does not disclose the main plate being constructed of resin material, does not disclose the first surface portion being constructed of resin material, does not disclose the second surface portion being constructed of resin material, does not disclose the side plate being constructed of resin material (claims 1-4), and does not disclose a drive mechanism configured to rotate the main plate (claims 14, 26, 27, and 28).

Art Unit: 3745

Glucksman shows an impeller having a main plate 3 constructed of resin material, blades 1 each having a blade first surface portion constructed of resin material and a second surface portion constructed of resin material, and a side plate 4 constructed of resin material, for the purpose of reducing the weight of the impeller. A drive mechanism 6/6' is provided, for the purpose of rotating the main plate. Kim (figures 5-10) shows an impeller 100 having a main plate 112 constructed of resin material, blades 120 each having a blade first surface portion constructed of resin material and a second surface portion constructed of resin material, and a side plate 130/230 constructed of resin material, for the purpose of reducing the weight of the impeller. An unillustrated drive mechanism is provided (column 4, lines 33-34), for the purpose of rotating the main plate.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the impeller of Van Rijswijk such that the main plate is constructed of resin material, the first surface portion is constructed of resin material, the second surface portion is constructed of resin material, and the side plate is constructed of resin material, as taught by either Glucksman or Kim, for the purpose of reducing the weight of the impeller. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the impeller of Van Rijswijk such that it includes a drive mechanism, as taught by either Glucksman or Kim, for the purpose of rotating the main plate.

The recitations of the side plate integrally molded with or fixed to the first surface portions by laser welding, the side plate being molded separately from the first surface portions, each edge portion being laser welded to the side plate, the first surface portion fixed to the main plate by laser welding, and the first portion being molded separately from the main plate, are all product-by-process claims. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of

Art Unit: 3745

a product-by-process claim does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Claims 6, 10, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Rijswijk and either (Glucksman 3,536,416 or Kim 6,848,887) and Sato 6,113,353 as applied to claims 1, 2, 3, and 4, respectively above. The modified impeller of Van Rijswijk shows all of the claimed subject matter except for the side plate including a material with a higher light transmittance than a material of the first surface portions (claims 6 and 17), and except for the main plate including a material with a higher light transmittance than a material of the first surface portions (claims 10 and 20).

It is common practice in the art to change the light transmittance (color) of separate parts in order to better differentiate between parts during assembly. Therefore, it would have been further obvious at the time the invention was made to a person ordinary skill in the art to form the modified impeller of Van Rijswijk such that the side plate includes a material with a higher light transmittance than a material of the first surface portions, and such that the main plate including a material with a higher light transmittance than a material of the first surface portions, as an engineering expedient.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

Art Unit: 3745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Verdier/
Primary Examiner, Art Unit 3745

Christopher Verdier
Primary Examiner
Art Unit 3745